

STATE OF COLORADO

Colorado Water Conservation Board

Department of Natural Resources

1313 Sherman Street, Room 721

Denver, Colorado 80203

Phone: (303) 866-3441

FAX: (303) 866-4474

www.cwcb.state.co.us



Bill Owens
Governor

Greg E. Walcher
Executive Director

Rod Kuharich
CWCB Director

Dan McAuliffe
Deputy Director

COLORADO FLOOD TASK FORCE AND WATER AVAILABILITY TASK FORCE REPORT

MEETING SUMMARY FOR JUNE 20, 2002

This report presents a summary information and presentations from the Flood Task Force and Water Availability Task Force meeting held at the Office of Emergency Management Offices on June 20, 2002. Meeting participants include various local, state and federal officials and private sector experts. Larry Lang is the Chair of the Flood Task Force (FTF) and can be reached at (303) 866-3989 and Brad Lundahl is Chair of the Water Availability Task Force (WATF) and can be reached at (303) 866-3339. The WATF and FTF meets during prime flood and drought season (April through September) to coordinate activities, monitor extreme weather conditions and share program information and assistance opportunities. Website hyperlinks and handouts are included in this report and at the end of the report that were provided by the agencies or individuals that reported.

REPORT ATTACHMENTS

- Energy Impact Task Force report
- Wildlife task Force report update
- Municipal Water Supply Task Force meeting minutes
- NOAA CDC Drought fact sheet
- USGS Colorado Drought Watch
- FEMA fire disaster news release
- 3 Forest Service GIS maps of the fires
- Letter to Secretary of Agriculture regarding Emergency Watershed Protection Program
- Letter to Secretary of Agriculture regarding NRCS – Environmental Quality Incentives Program
- NWS list of useful weather sites
- Bureau of Reclamation Reservoir Storage Report
- NOAA – CDC summer precipitation forecast graphic
- Governors Executive Order banning open burning and sale and use of fireworks

ATTENDEES:

Mike Gillespie – NRCS (Snow Survey)

Chester Pauls – CDPH & E

Wade Nofzinger – FEMA

Jack Truby – citizen

Larry Lang – Colorado Water Conservation Board

Jim Soule – Colorado Geological Survey

Keith Vander Horst - Division of Water Resources

Peter Binney – City of Aurora

Ron Cattany – Dept. of Natural Resources

Mary Halstead – Division of Wildlife

Ken Wollice – NOAA Climate Diagnostics Center

Bob Glancy – National Weather Service

Reagan Waskoan – CSU

Matt Knoedler – Gov. Owen's Office

Jeff Lukas – CU / NOAA

Ann Schrader – Denver Post

Marv Koleis – Office of Emergency Management

Robert Webb – NOAA Climate Diagnostics Center

Olag Erlich – Office of Energy Management & Conservation

Anderea Anglada – Office of Personnel and Budget

Barry Cress – Department of Local Affairs

Jeanette Alberg – Senator Wayne Allard's Office

Van Shipley – USACE - Colorado Service Center

Joe Busto – Colorado Water Conservation Board

John Henz – HDR Engineering (Hydro-Met)

Jana Riedesel – Division of Water Resources

Marti Morgan – Senator Wayne Allard's Office

Robin Knox – Division of Wildlife

Bob Steger – Denver Water

Bill Hansen – Consultant

Scott Davis – BLM

John Gordon – USGS

Brad Lundahl – CWCB

Anderea Ray – NOAA climate Diagnostics Center

Megan Braet – Trout Unlimited

Marilyn Gally – Office of Emergency Management

Chris Rodkin - Colorado Water Utility Council

PRESENTATIONS

Update from Governor Owens Office – Matt Knoedler

Matt reminded the task forces that the Governor imposed a ban on fires and fireworks on Monday June 10th as a precautionary step so that new fires can be minimized as the state has its hands full fighting fires right now. He

Flood Protection • Water Supply Planning and Finance • Stream and Lake Protection
Water Supply Protection • Conservation and Drought Planning

mentioned the new fire burning in the South Fork Area. The Governor has two major natural resource concerns right now. The first was working with federal agencies to open additional grazing lands to assist ranchers in this drought and to have the Executive Director of Natural Resources coordinate the state and federal efforts to secure as many federal and state grants for watershed restoration and protection in the fire areas. Mr. Knoedler urged that the agencies do their mission but coordinate with the EDO-DNR. A copy of a letter to Secretary of Agriculture Ann Veneman is attached and requests assistance through the NRCS - Environmental Quality Incentives Program to help farmers and ranchers implement sound grazing and farming practices to lessen the impact of the drought on the environment. Knoedler mentioned how the use of GIS and reservoir inventories will be helpful to protect water supplies like Vallecito, Cheesemen and Linden Reservoirs. He also mentioned that a number of smaller water supplies have already been affected with sediment and poor water quality. The Governor plans to make Colorado Cares Day related to the recent fires and give citizens an opportunity to assist.

He also mentioned a letter from Senator Wayne Allard that will see lots of support and funding for watershed and water supply protection. He anticipated that this request for funds will sit through the August recess of Congress and funding might begin as soon as September 2002.

FEMA – Wade Nofzinger

Mr. Nofzinger spoke about FEMA handling the presidential Disaster declaration and mentioned that Steve Emery is the federal coordinator and that Tommy Grier of the Office is the state coordinator for the disaster. He mentioned that FEMA advanced Colorado \$20 million for fire management grants and that is separate than the new disaster declaration. The current declaration is aimed at funds for the homeowners that recently lost their homes in the fire. See the FEMA website for more details. <http://www.fema.gov/reg-viii/fire2002/20million.htm> The timeline for the disaster declaration is open which is unusual and speaks to the magnitude of the fires. The Disaster Field Office is open and is at 730 Simms Street, Lakewood, Colorado. The DFO telephone number is (720) 544-2511.

CWCB – Larry Lang

The 2002 legislature enacted the Colorado Watershed Assembly (CWA) Bill, Senate 02-87 this year, and it will be in the form of a state tax check off contribution for individuals interested in supporting watershed protection and restoration. Funds from the CWA Bill are designated to go to the CWCB. The program will run through the CWCB's Flood Protection Section. Mr. Lang mentioned that FEMA contracted with the Bureau of Reclamation for watershed restoration efforts and the CWCB will likely be collaborating with the Bureau in the capacity of the CWCB's program areas of Flood Response, River Restoration, and Floodplain mapping. Lang mentioned that we have \$100,000 to start the program. The other program area the CWCB has that may assist in the fires was a wetland mitigation fund that the legislature amended to enable the CWCB to assist in impaired waters. For flood program, emergency numbers and weather links visit the CWCB website <http://cwcb.state.co.us/>

Colorado Department of Public Health & Environment – Chester Pauls

Mr. Pauls mentioned that they received funds passed over from the EPA that are called "Section 319" of the Clean Water Act funds for non point source pollutant sources (i.e. sediment, metals, chemicals) drinking water quality and maintains a significant cash fund from water quality violators that can be available for grants. The problem he posed was knowing exactly how many watersheds and communities will be affected and how to get the funds to local governments. Nonpoint source pollution is caused by rainfall or snowmelt moving over and through the ground. As the runoff moves, it picks up and carries away natural and human-made pollutants, finally depositing them into lakes, rivers, wetlands, coastal waters, and even our underground sources of drinking water. These pollutants may be: Excess fertilizers and pesticides from agricultural lands and residential areas; Oil, grease, and toxic chemicals from urban runoff and energy production; Sediment from unprotected construction sites, crop and forest lands, and eroding stream banks; Salt from irrigation practices and acid drainage from abandoned mines; Bacteria and nutrients from livestock, pet wastes, and faulty septic systems.

Their grant cycle is proposals submitted from November 2002 to January 31, 2003 and their decisions are made by April 2003 for next funding cycle. They had 30 application for 2002 and were able to fund about 20 of those. Typically they get \$2.4 million 1/2 is used for general program activities and the other half is specifically used for 303D listed segments of TMDL streams. It is a competitive grant cycle with proposals requested. The governor can step in and require use of these funds in forest fire areas otherwise it is a competitive grant cycle. They have no emergency grant provisions. For more

information contact Laurie Fisher, Non Point Source Program Coordinator at (303) 692 3500 ext. 3570. For more information visit their website at <http://www.cdphe.state.co.us/wq/wghom.asp>. There is Total Maximum Daily Load funding through the non point source program that involves impacts to water quality with droughts and may be used to develop resources.

NRCS – Mike Gillespie

June 1st snowpack was 2% of average and 10% of last year. It is key to understand that melt out at the end of the season should not be compared to snowpack accumulation in the winter. NRCS had only 2 stations with snow in one in the North Platte and one in the front range on June 1st. Snow had melted out June 9th which is the earliest ever and a typical year is more like July 27. The reservoir deviation from average graph illustrates that collectively for the state we are 1 million acre feet below average. <http://www.co.nrcs.usda.gov/snow/snow-index.htm>

DWR – Keith Vanderhorst

Reservoirs did not get topped off and are low on water or will be out of water this summer. In some basins well owners and well user groups are not able to replenish water for their augmentation plan requirements and will be curtailed from pumping soon or in July. In the Arkansas basin the well augmentation program is running out of water and the well users associations will have to curtail use. The SEO may be forced into well administration this summer and shutting down wells. For the complete State Engineer's report visit the Division of Water resources Office website at <http://water.state.co.us/pubs/swsi/swsi06-02.pdf>

Streamflow peaks are ½ of the 1977 water year and lowest runoff in May ever recorded. The average runoff is around 650,000 AF and this year's forecast runoff is 200,000 AF. Higher temperatures will not help and we may surpass the 1977 drought. The SWSI index had the: Yampa/White basin in severe drought, the Colorado basin in a severe drought, the Gunnison basin in moderate drought, the San Juan Dolores basin in severe drought, the Rio Grande basin in moderate to severe drought, the Arkansas basin in severe drought, the South Platte basin in a moderate drought.

South Platte - Concern whether the supplies from reservoir and natural flow will be able to meet the demand of agriculture on the plains this year. Also are concerns that augmenting groups will not have sufficient water to provide replacement of all out of priority well depletions.

Arkansas basin – Several large ditches with junior water right have exhausted all of their stored supply. Well pumping has been notably high throughout the March through May time period.

Rio Grande basin – San Luis Valley reveals all characteristics of serious drought, little or no snow on the peaks, parched rangeland, and low flows in the creeks, rivers and reservoir levels and persistent winds. This water year will likely surpass 1977 as the drought of the century. The aquifer there is largely man made from irrigation seepage and there will be less recharge of the aquifer this year.

Gunnison basin – The Division 4 office continued to honor a river call for the Gunnison Tunnel. The first time nearly 50 years that available inflows were less than the demand at the tunnel. Applications for new well permits have been filed at near-record levels due to the dry conditions and many homeowners are having to re-drill their wells.

Colorado Basin – The forecasted storage content for Green Mountain Reservoir is 100,000 AF and the 66,000 AF, the historic user pool (HUP) is projected to not fill the year. The HUP was established to ensure that Western slope agricultural, domestic and municipal users placed in service prior to 1977 but junior to the Colorado Big Thompson Project water rights priority would still be allowed to divert when the Colorado river mainstem call came on. With the HUP not filling the contract pool in Green Mountain will not receive any water and many augmentation plans in Division 5 rely on this pool. The CWCB, the Bureau of Reclamation and DWR are working on a plan to exchange unused contract water in Ruedi Reservoir into Green Mountain Reservoir in order to satisfy the HUP and contract pools.

Yampa / White basin – Numerous stream systems are under administration. Most irrigation reservoirs are expected to be drained or lowered to minimum levels before the end of summer. First time the mainstem of the white River has been under administration.

San Juan / Dolores basin – Depending on the continued usage for the ditches, there could be very little additional storage to meet late season demands. It is not known what effect would be to springs below the mesa top lands if reservoirs are drained and the natural stream is the only remaining supply.

National Weather Service (Larry Walrod)

The NWS has six meteorologists assisting at four command centers for the forest fires. There was recent golf ball sized hail in Well county and 2-3" of rain in Douglas County. That rainstorm dumped ¼ " rain on the Hayman Fire. There is a moist atmosphere today and weather that average. Won't take much rain to cause flood problems in the burn areas. Don't see relief in near future. The northeast part of the state may get some moisture but the is Gulf of Mexico storms this summer haven't produced much moisture on the western slope.

HDR Engineering (Hydro-Met) – John Henz

CWCB contracts with John Henz for forecasts and posts them to the website. His PowerPoint presentation can be found at http://cwcb.state.co.us/flood_watch/index.html#flow El Nino impact on this summer? First, the summer monsoon preceding a new El Nino usually features an early but "eastern" monsoon. "Eastern monsoon" means moisture fetch off the Gulf of Mexico, not the Pacific Ocean. Favors most summer rain on the plains east of the Continental Divide not west of Divide. Summer flash flooding threat will focus on urban areas along the Front Range and the Cheyenne Ridge, Palmer Divide and Raton Mesa features and fire-burn areas.

Summer flood threat - depends on the following factors. Strength and source of the summer, monsoon suggests flooding threat primarily along the Front Range east of the Continental Divide. Fire burn zones pose a serious threat to life, water supply and property. West of Divide fire zones pose primary risk from July 15 to Sep 1.

Summer forecast - Above average severe weather threat on eastern plains with return of damaging hail and tornadoes to Front Range from Fort Collins to Pueblo. A major Denver event is possible in June and early July. Precipitation will struggle to reach normal until 4th of July and then remain +/- 25% of normal July into mid-August in the east. Most rainfall along the Colorado-Kansas border. West of the Divide will remain dry until the "monsooner" starts about 4th of July. Flash flood threat will be very active 10 July until 20 August. Rainfall will be about 60-90% of normal. Mountain reservoirs will still remain below normal and demand may exceed supply by August unless a "lucky" monsoon rain hits the right basins.

National Oceanic Atmospheric Administration – Climate Diagnostics Center – Klaus Wolter

Klaus states that two months ago the El Nino that was building was on life support but now it has grown substantially and may make it in the top 10 for El Ninos in a best case scenario. Klaus used some of the USGS streamgauge graphs to illustrate that July is often a mini dry season in the north west region of the state and they don't get the typical monsoon moisture that the eastern part of the state gets. He forecasted wetter than average conditions in the north east and stated that a drought is very hard to break out of. Klaus Wolter's forecasts are on the web at <http://www.cdc.noaa.gov/~kew/SWcasts/>. An executive summary of Klaus's forecast follows:

1. El Niño has grown dramatically over the last month, even more so than most predictions made earlier this year. This was anticipated in last month's executive summary, but exceeded even my expectations. In the immediate future, I do not anticipate large changes in the strength of this El Niño event, although continued slow growth appears more likely than not.
2. Historically, even modest El Niño conditions have been associated with wetter than average conditions for the summer months in Colorado and several adjacent states. I am now more confident than in previous months that this El Niño will be around through the summer, and at a big enough size to have an impact. Climate impacts through the upcoming winter season are probable in Colorado, and will be outlined in subsequent updates of this webpage.
3. The latest experimental forecasts for July through September continue a better than 50/50 chance for wetness in eastern Colorado, compared to unknown odds for the westernmost regions. These forecasts are based on a variety of influences on our climate, with El Niño being just one of several indicators that look favorable for this summer. The one factor that continues to reduce my confidence in this forecast is the historic tendency of drought conditions to perpetuate themselves. Enough data has been collected through the recent spring season to check my spring forecast of relative wetness over the northern Colorado Front Range compared to dryness towards the Four Corners region - the distribution of rainfall followed the forecast pattern, but with reduced amounts almost everywhere.
4. Several moderate storms and cool, damp weather were beneficial in northeastern Colorado from mid-May through early June, and have kept fires at bay in this region compared to much of the rest of the state that appears to be under siege from multiple human-caused fires. From Arizona into the San Juans and southern Utah, where April-June is the driest time of the year, only the upcoming monsoon season will be able to reduce current extreme fire danger conditions, and mitigate against some of the other drought impacts.

5. Bottomline: I continue to believe that the odds for an above-average monsoon season are close to 60% for eastern Colorado and New Mexico, while Arizona and western Colorado face a more uncertain monsoon season. Compared to last month, the "wet" forecasts have weakened somewhat, but I anticipate a "rebound" by next month, when the recently strengthened El Niño event will be a stronger factor.

Colorado Climate Center – Roger Pielke

The Colorado Climate Center website has climate data for Colorado and is at <http://ccc.atmos.colostate.edu/index.shtml>. Mr. Pielke presented the 3/6/24/48 month Standard Precipitation Index graphs and pointed out that many of the dry areas bulls eyes correlate to the dry fuel wood areas in the state. He expressed the idea that this is not the 100-year drought and typical of Colorado climate, but that due to heavy demand we are more vulnerable than say agricultural and municipal use was in the 1950's. He expressed the idea of using water transfer capabilities to send water from abundant areas to dry areas to reduce vulnerability. He stated that the forest fires have indeed been over seeding clouds and in fact inhibiting storms from raining. He also stated that there have been studies shown that storms tend to form in the burned areas after forest fires. He stated that the large black burned areas attracts solar radiation, and solar radiation can help produce storm clouds. This can possibly contribute to the flooding problems after forest fires. He offered the possibility that streamflow is less now due to trees and consumption that wasn't there near stream gages in the past. Mr. Pielke noted that in the useless drought facts on the national drought mitigation center website that it is possible for big droughts persist or come back to back. The example was 1930-2 was a drought and it returned from 1933-1938. That was a national drought of over 90 months. We are currently in 31 months of national drought.

DROUGHT TASK FORCE – IMPACT TASK FORCE REPORTS

The Impact Task Force Reports are posted on the CWCB website at

http://cwcb.state.co.us/owc/Drought_Planning/2002_Drought_Information.htm

However the Municipal, Energy and Wildlife Task Forces presented reports and they are attached.

The Western Electricity Coordinating Council website hosts the Energy Impact Task Force report at http://www.wecc.biz/05-15-02_Summer_Assessment_2002.pdf.

Department of Local Affairs (Municipal Water Supply Impact Task Force) – Barry Cress

Mr. Cress presented the minutes from the municipal Water Supply Task force and they are attached. He stated that 20 people attended that meeting and 10 were appointees to the TF. The Water Utility council repeated a survey that they had recently send around at the end of May and Chris Redken presented the results of the survey. The CWCB has been asked to post the results of the survey in the end of June. He stated that topics to help municipal users is the transfer or leasing of unused agricultural water rights and funding for emergency infrastructure improvements. DOLA has been a part of funding 5 new water supply projects around the state. DOLA will be conducting a series of four workshops in mid July in Durango, Greeley, Pueblo and Palisade related to drought and water conservation. The tentative agenda listed USGS presentations on Current and future water quality and quantity rules and regulations and a water conservation case studies by the Bureau of Reclamation. He also mentioned that Denver Water was looking at having water workshops regarding watering restriction on larger systems. Jack Truby mentioned that to date a drought disaster declaration is never declared in Colorado but that hauling water to water users might be a cost that could be recuperated if documented. Mr. Cress mentioned that the Pinewood District had been hauling water for the fast few years.

USGS – John Gordon

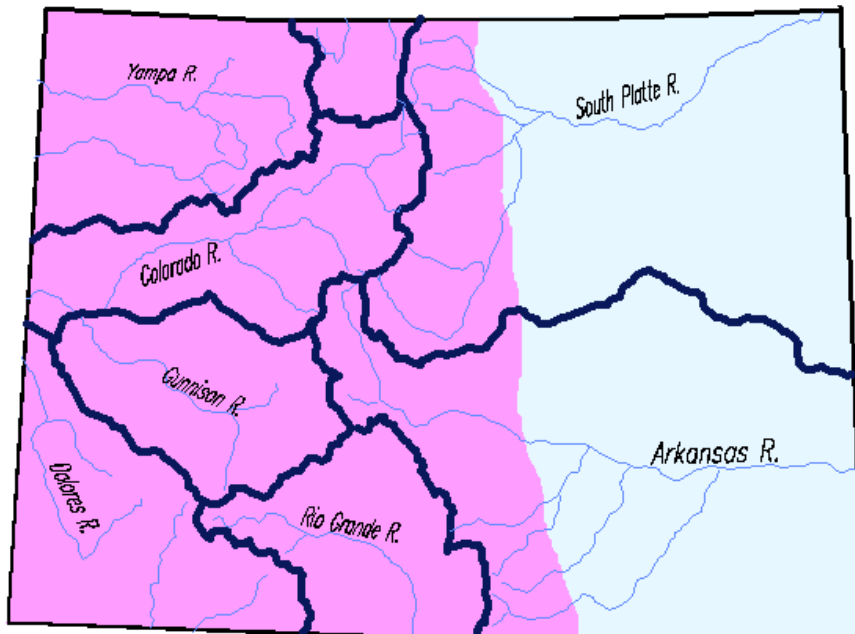
Mentioned that there is a USGS website related directly to drought with graphs and stream gage data available. There are only 29 sites to date but you can retrieve composite, medium, low, and current streamflow data from the website.

REMINDERS

- **The Flood Task Force has adjourned for the 2002 season. The FTF will resume meetings next spring 2003. However, CWCB Flood staff will participate in the Water Availability Task Force time permitted and expects to be very busy with flood protection and watershed restoration resulting from the myriad of fires in the summer 2002.**
- **The next WATF meeting was set for July 26th at 1 p.m. with the location to be announced at a future date. For questions about either of the Task Forces please call Larry Lang at (303) 866-3989 or Brad Lundahl at (303) 866-3339.**

Snowpack

June 1, 2002

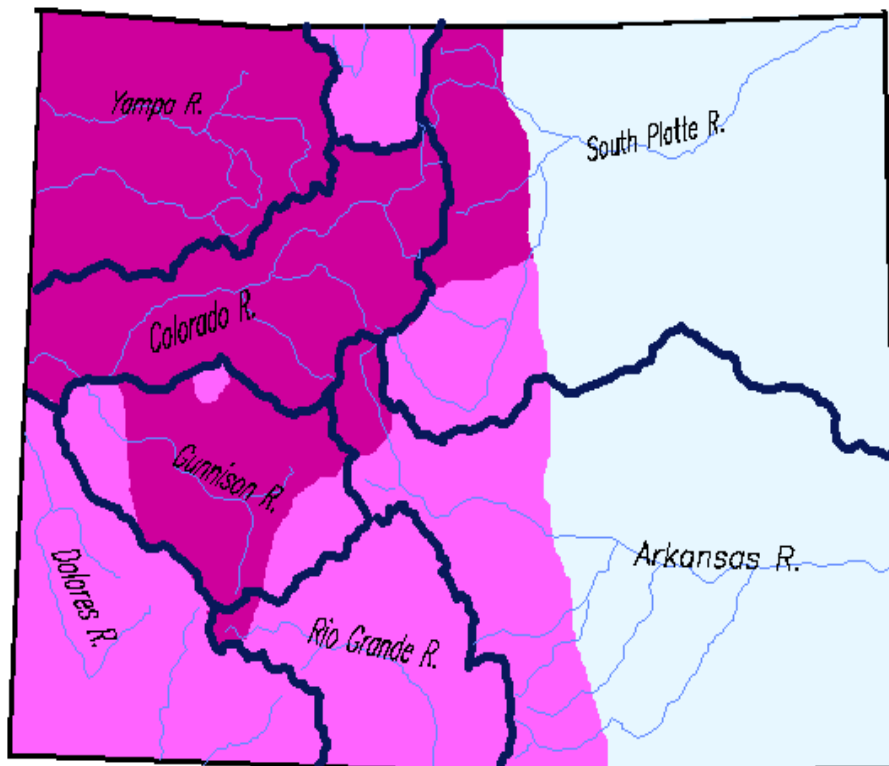


- Much Above Average > 130%
- Above Average 110% to 130%
- Near Average 90% to 110%
- Below Average 70% to 90%
- Much Below Average 50% to 70%
- Extremely Below Average 25% to 50%
- Exceptionally Below Average 0% to 25%
- Not Measured
- ~ Major River Basin Boundary

**Statewide: 2% of Average
10% of Last Year**

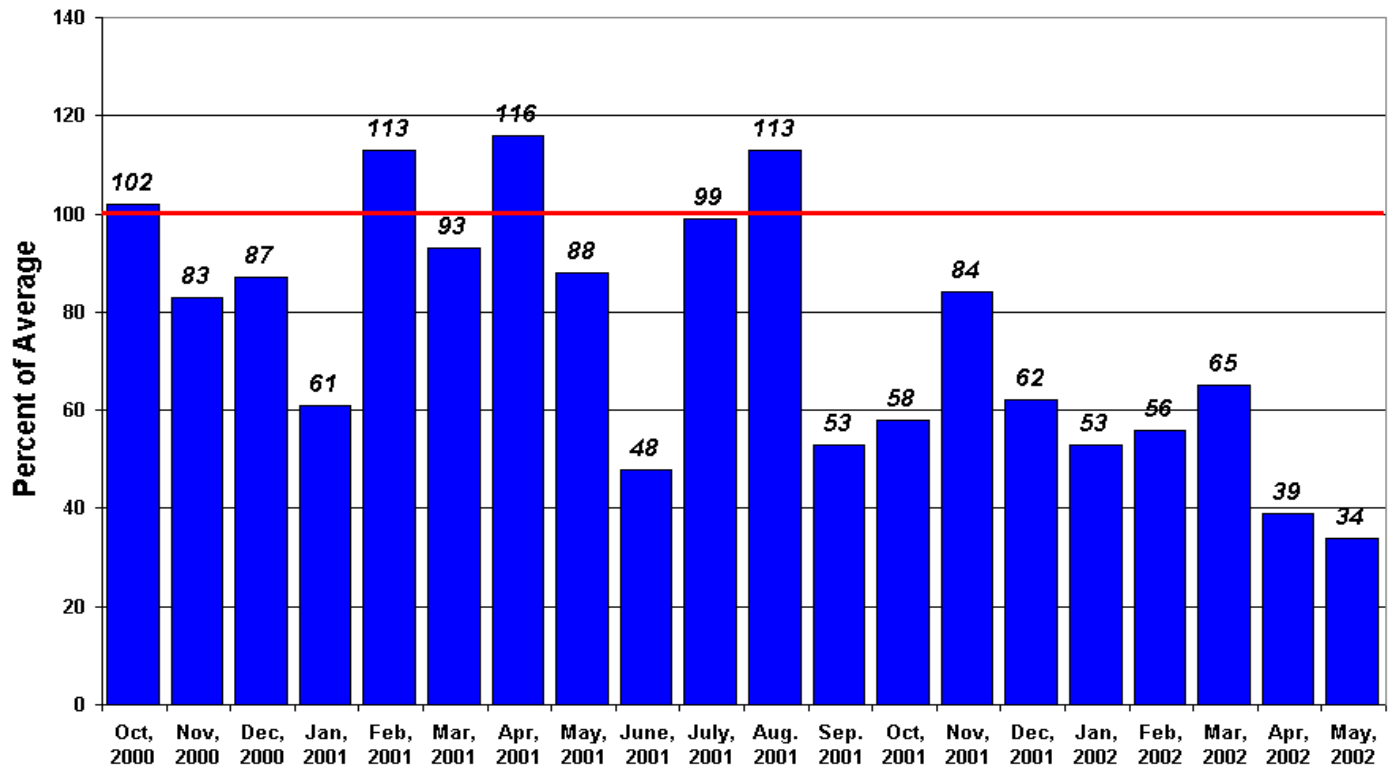
Streamflow Forecasts

June 1, 2002



- Much Above Average > 130%
- Above Average 110% to 130%
- Near Average 90% to 110%
- Below Average 70% to 90%
- Much Below Average 50% to 70%
- Extremely Below Average 25% to 50%
- Exceptionally Below Average 0% to 25%
- Not Forecast
- ~ Major River Basin Boundary

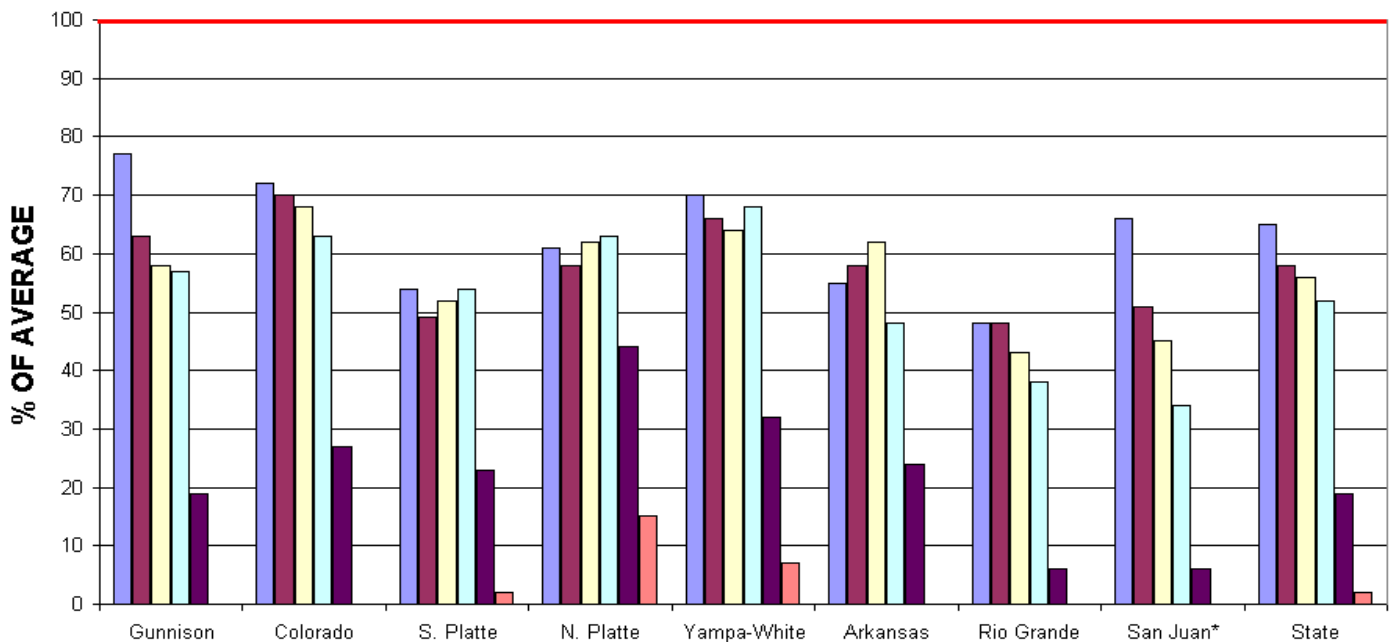
Colorado SNOTEL Precipitation



COLORADO SNOWPACK Summary for 2002

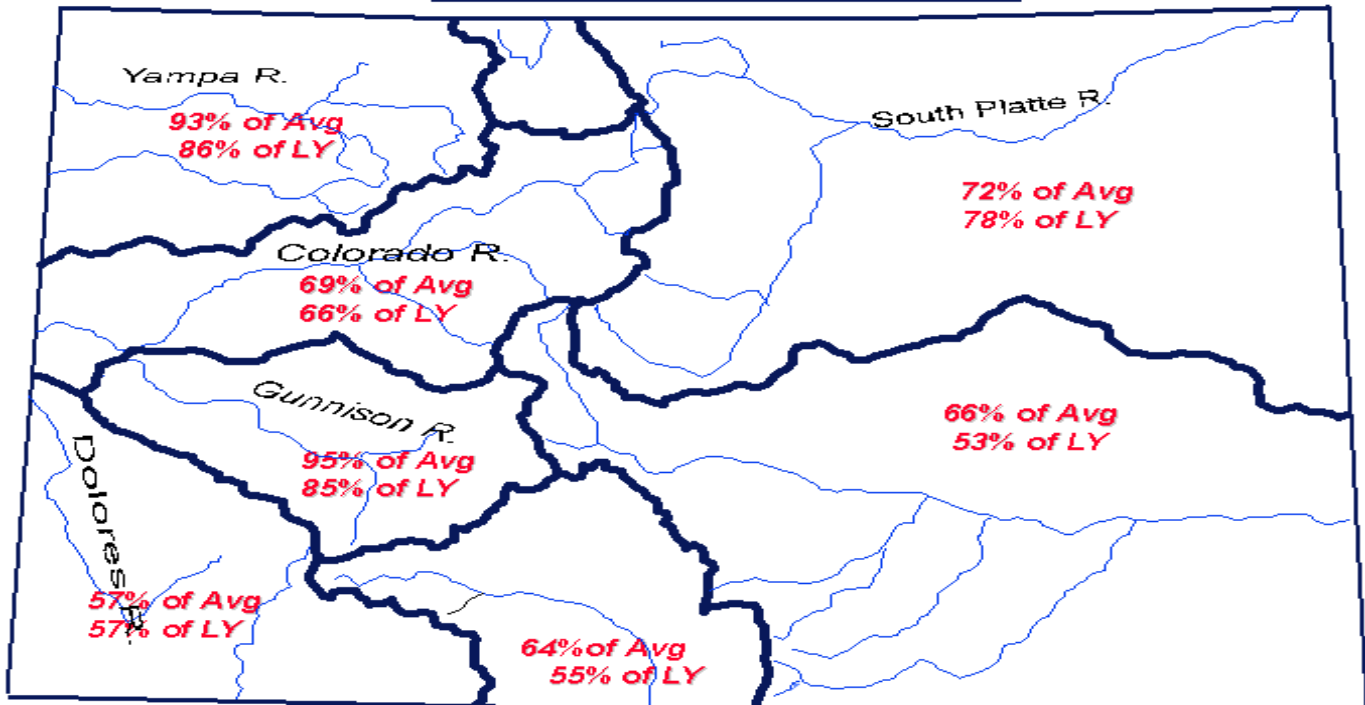
USDA Natural Resources Conservation Service

■ JANUARY ■ FEBRUARY ■ MARCH ■ APRIL ■ MAY ■ JUNE



*Includes Animas, Dolores, San Miguel Basins

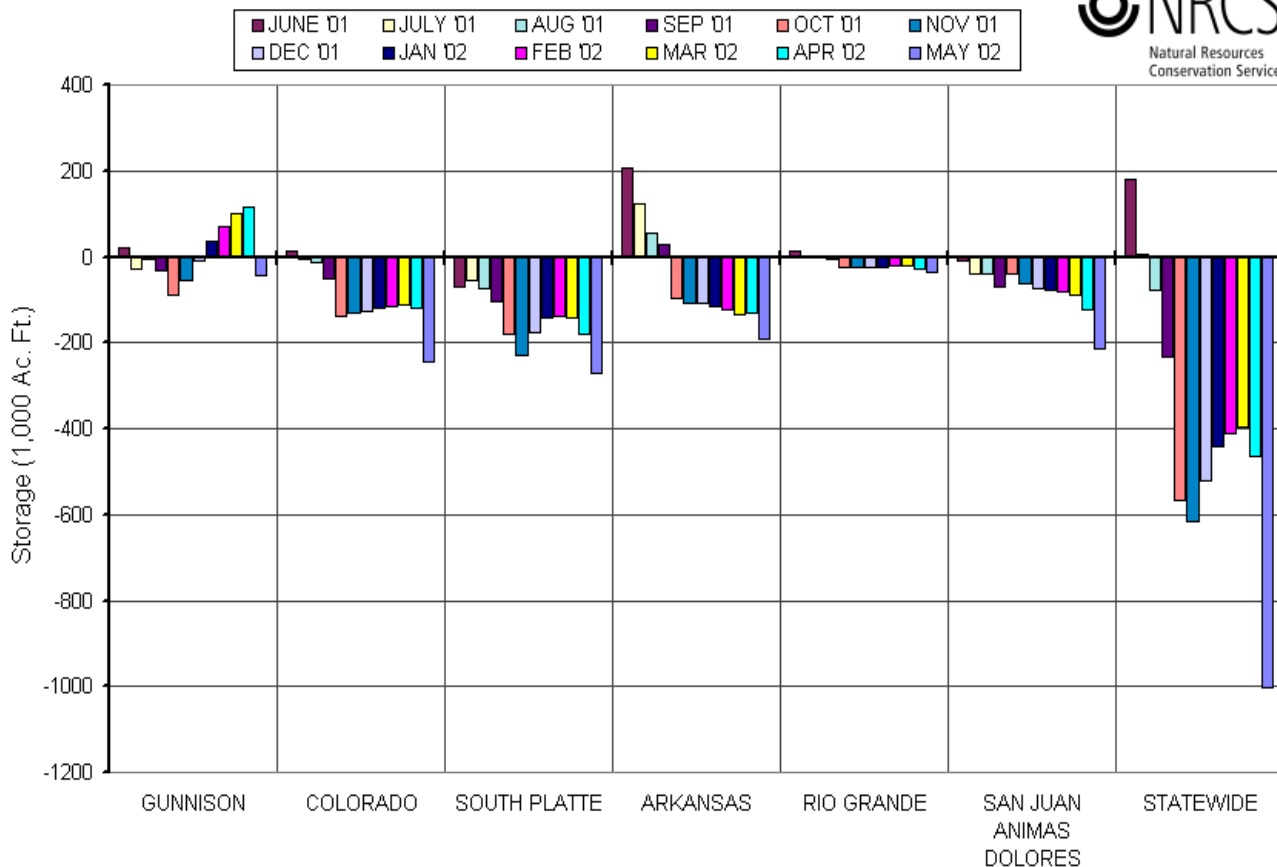
Reservoir Storage June 1, 2002



**Statewide: 73% of Average
69% of Last Year**

COLORADO RESERVOIR STORAGE

End-of-Month Departure from Average



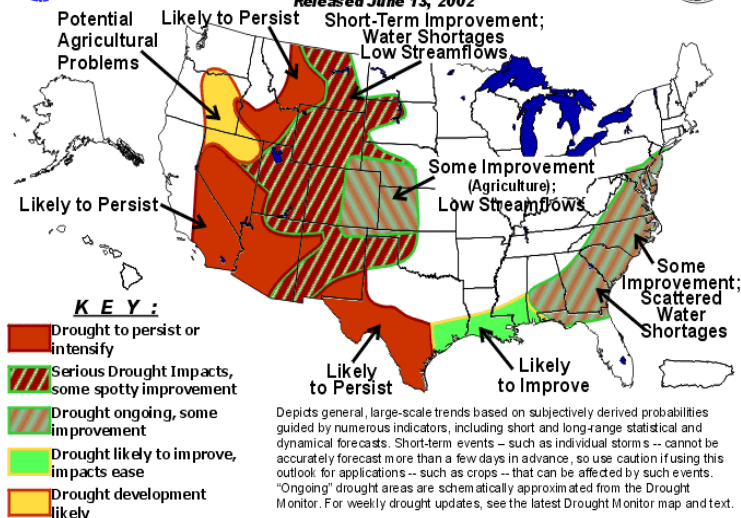


The fire burns dangerously close to Glenwood Springs.



U. S. Seasonal Drought Outlook Through September 2002

Released June 13, 2002



U.S. Drought Monitor

June 18, 2002
Valid 8 a.m. EDT

